

Claims

I claim:

1. An improved strap assembly for a swim fin, comprising:
 - (a) an adjustable heel strap having two distal ends arranged to be secured to two lateral sides of a swim fin foot pocket, said adjustable heel strap having a predetermined heel strap tension between said two lateral sides, at least one of said two distal ends having an adjustable heel strap buckle arranged to adjust said predetermined heel strap tension;
 - (b) an instep strap secured to said adjustable heel strap with an instep strap connection located between said distal ends, said instep strap secured to said heel strap at an instep strap base, said instep strap having a free end portion spaced from said instep strap base and said adjustable heel strap, said free end portion being secured to an adjustable instep buckle, said adjustable instep strap being capable of securing to the ankle of a swimmer with a loop having a predetermined instep strap tension between said instep strap base and said adjustable instep buckle, said instep buckle being arranged to permit said predetermined instep strap tension to be significantly adjustable, said instep strap connection being sufficiently spaced from said adjustable heel strap buckle to permit said adjustable heel strap buckle to efficiently adjust a significant amount of said predetermined heel strap tension.
2. The strap assembly of Claim 1 wherein said instep strap connection is a heel pad.
3. The strap assembly of Claim 2 wherein said heel pad has an opening for receiving said adjustable heel strap.
4. The strap assembly of Claim 3 wherein said opening is movable relative to said adjustable heel strap has said predetermined heel strap tension is adjusted with said adjustable heel strap buckle.
5. The strap assembly of Claim 4 wherein said opening is a sleeve structure made of

fabric.

6. The strap assembly of Claim 5 wherein a heel cushion is sewn to said sleeve.
7. The strap assembly of Claim 6 wherein said adjustable instep buckle is secured to said heel pad with a quick release connector.
8. The strap assembly of Claim 6 wherein at least one of said two distal ends of said heel strap is arranged to be removable from said lateral sides of said swim fin.
9. The strap assembly of Claim 6 wherein said adjustable heel strap buckle is secured to both of said two distal ends of said adjustable heel strap.
10. The strap assembly of Claim 6 wherein said instep strap base is secured to said heel pad with a quick release connector.
11. The strap assembly of Claim 1 wherein said instep strap base is secured to said heel pad with a quick release connector.
12. A method for providing an improved strap assembly for a swim fin, comprising:
 - (a) providing an adjustable heel strap having two distal ends arranged to be secured to two lateral sides of a foot pocket on an adjustable swim fin, said adjustable heel strap having a predetermined heel strap tension between said two lateral sides, at least one of said two distal ends having an adjustable heel strap buckle arranged to adjust said predetermined heel strap tension;
 - (b) connecting an instep strap secured to said adjustable heel strap with heel pad located substantially between said distal ends, said heel pad having lateral side edges, said instep strap secured to said heel pad at an instep strap base, said instep strap having a free end portion spaced from said instep strap base and said heel pad, said free end portion being secured to an adjustable instep buckle, said adjustable instep strap being capable of securing to the ankle of a swimmer with a loop having a predetermined instep strap tension between said instep strap base and said adjustable instep buckle, said instep

buckle being arranged to permit said predetermined instep strap tension to be significantly adjustable, said lateral side edges of said heel pad being sufficiently spaced from said adjustable heel strap buckle to permit said adjustable heel strap buckle to efficiently adjust a significant amount of said predetermined heel strap tension without interference from said heel pad.

13. The method of Claim 12 wherein said heel strap is made with a fabric material.

14. The method of Claim 13 wherein said heel pad has a closed sleeve arranged to secure said heel pad to said adjustable heel strap.

15. The method of Claim 12 wherein said heel pad is located at a predetermined height along the heel portion of a swimmer's foot, said adjustable heel strap buckle and said adjustable instep strap buckle are arranged to permit said predetermined height to be adjusted by adjustment of said predetermined heel strap tension and said predetermined instep strap tension.

16. The method of Claim 12 wherein said adjustable heel strap buckle and said adjustable instep strap buckle are arranged to significantly prevent said adjustable swim fin from being lost while swimming in large waves.

17. The method of Claim 12 wherein said instep strap is secured to said heel pad with a quick release connector arranged to permit efficient connection and disconnection while in the water.

18. The method of Claim 12 wherein said adjustable instep buckle is secured to said heel pad with a quick release connector arranged to permit efficient connection and disconnection while in the water.

19. The method of Claim 12 wherein said predetermined heel strap tension is adjusted by said adjustable heel strap buckle and said predetermined instep strap tension is adjusted by said adjustable instep strap buckle in an amount sufficient to significantly reduce the amount of lost motion between said adjustable swim fin and the swimmer's foot.

20. The method of Claim 14 wherein said predetermined heel strap tension is adjusted by said adjustable heel strap buckle and said predetermined instep strap tension is adjusted by said adjustable instep strap buckle in an amount sufficient to permit the swimmer's instep region of the ankle to apply increase leverage upon said adjustable swim fin during kicking strokes.

21. The method of Claim 12 wherein said heel pad is relatively narrow in a lateral direction.